



# Australian Bureau of Statistics

## CensusAtSchool Australia

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### Resources



### CaSQ 3B - Numerical Data: What's The Difference Between Discrete and Continuous?

You can download this activity as a rich text file (RTF) using the link at the bottom of the page.

|                                                                                                                                                                                                                         |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Data</b><br>Data can be classified into two different types.                                                                                                                                                         |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                |
| <b>Categorical</b><br>Values or observations that can be sorted into groups or categories. Bar charts and pie graphs are used to graph categorical data.                                                                |                                                                                                                                                                                                                   | <b>Numerical</b><br>Values or observations that can be measured. And these numbers can be placed in ascending or descending order. Scatter plots and line graphs are used to graph numerical data.                                                    |                                                                                                                                                                                                |
| <b>Nominal</b><br>Values or observations can be assigned a code in the form of a number where the numbers are simply labels. You can <b>count but not order</b> or measure nominal data. Examples: Sex, and eye colour. | <b>Ordinal</b><br>Values or observations can be ranked (put in order) or have a rating scale attached. You can <b>count and order</b> , but not measure, ordinal data. Example: house numbers and swimming level. | <b>Discrete</b><br>Values or observations that is counted as <b>distinct and separate</b> and can only take particular values. Examples: the number of kittens in a litter; number of threads in a sheet, number of stars given for an energy rating. | <b>Continuous</b><br>You can <b>measure</b> continuous data. Values or observations <b>may take on any value</b> within a finite or infinite interval. Examples: height, time and temperature. |

### Task:

1. Place a 'D' for 'discrete' or 'C' for 'continuous' next to each of the following topics of questions from the CensusAtSchool online questionnaire

\_\_\_\_\_ Arm span

\_\_\_\_\_ How much money did you earn last week?

\_\_\_\_\_ Concentration exercise (seconds)

\_\_\_\_\_ Dominant hand reaction time

2. Write down four examples of discrete data.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

3. A CensusAtSchool question asks you to select a value between 1 and 1000 on the importance of various social and environmental issues. Decide whether this data would be discrete or continuous, and give reasons for your decision.

**Download the full activity:**

**RTF**

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